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The early days of SMIA in perspective

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When planning for the first Nordic Conference, the organizing committee, in the first circular wrote:

“In view of the large number of specialized technical methods now available for the study of archaeological problems, it is important that means be provided to improve contacts among archaeologists and specialists. Archaeologists must be made aware of new developments in the physical, chemical, and biological sciences applicable to their own field, and, of equal importance, of the limitations and uncertainties inherent in the methods.

On the other hand, the specialists must be informed about the needs of the archaeologists in order to adapt their methods to the archaeological problems.”

This can well be compared to the very similar definition of the purpose of Scientific Methods in Archaeology in the circular inviting participants to the present meeting “The X Nordic Meeting on Stratigraphy & The XI Nordic Conference on the Application of Scientific Methods in Archaeology SMIA XI”. So, what has changed? Clearly a lot.

The first initiative came mainly from us working in dating. The radiocarbon method had already produced a lot of data and the impact on chronol-

ogy was obvious. At the same time, we learned more about calibration of radiocarbon dates and the need to correct for isotopic fractionation, hard water effect, etc. The accelerator technique was also developing and that suddenly opened up for new possibilities but also raised new requirements for sample selection and treatment. Originating with the March meetings at the Research Laboratory for Archaeology and the History of Art in Oxford, UK, the thermoluminescence method was brought to Denmark, and also to us in Helsinki.

It was a time of enthusiasm. But this can also be seen as an international trend. The field of archaeometry was introduced and International meetings were being held. A week after the second Nordic meeting in Helsingör, Denmark, the First International Conference on C14 and Archaeology was held in Groningen, the Netherlands. The French association for archaeometry: GMPCA (Groupe des Méthodes Pluridisciplinaires Contribuant à l’Archéologie) was founded in 1976, and it works to promote archaeometry in France and worldwide, while organising biannual conferences. On a wider inter-national scale, it should be mentioned that the already 41st International Symposium on Archaeometry (ISA) took place in May 15–21, 2016 in Kalamata, Greece.



Figure 1. Participants in the 3rd SMIA conference, held in 1984 in Mariehamn (Åland), gathered ready for an excursion to the Kastelholm Castle. A number of papers dealing with medieval archaeology at and around the castle were given at the conference. Photo: Högne Jungner.

One aim of the first SMIA conference was to discuss the potential Nordic co-operation on the development of thermoluminescence dating. The idea of a Nordic Laboratory for Thermoluminescence and other archaeometric methods had been under discussion with representatives of all the Nordic countries. The plans for the implementation of new techniques were well received, but most archaeologists felt that their needs would be better served by national laboratories working closely together. A few years later the Nordic Laboratory for Luminescence Dating was finally established and has today achieved a well-documented international status. A similar initiative was also discussed in 1982 regarding a Nordic cooperation in accelerator dating. Also in this case the establishment of separate national laboratories was preferred, and today there are accelerators for dating in all Nordic countries except Iceland.

At the second SMIA meeting held in Denmark, a number of papers on different dating methods, C14, thermoluminescence and dendrochronology, were presented. The accelerator technique was introduced, and as an example of the use of stable

carbon isotopes, a paper showing the change in the diet of prehistoric humans in Denmark was given. In addition, papers on soil studies, magnetic prospection, neutron activation analysis and osteological studies, should be mentioned. Of interest were also the presentations of projects with combination of archaeometric methods such as: Helgeandsholmen in Stockholm, the town of Skien in Norway, and excavations at an Iron Age site in Salo in southwest Finland. A similar multi-disciplinary trend continued at the SMIA meetings that followed.

At our first Nordic meetings, we had many participants also from outside the Nordic countries. In that respect the Nordic meetings created wider contacts. An important role was played by the PACT group, in the beginning formed as an advisory group under the European Council. At that time, the financial support by Strasbourg and Brussels was not available as it is today, but some support for meetings and publication costs was possible to obtain. In fact, looking at the series of PACT publications, one can see that many volumes are related to Nordic activities.



Figure 2. Dr Galina Hutt (center) from the Institute of Geology, Tallinn, professor Garman Harbottle (right) from Brookhaven National Laboratory, New York, professor Joakim Donner (left) from Institute of Geology, Helsinki and Högne Jungner in a lively discussion at the reception of the 3rd SMIA meeting (Mariehamn, Åland).

Regarding the PACT activities, it should be mentioned that there was not only information transferred from more southern Europe to the northern countries. In fact, bioindicators like pollen and spores, which are widely used by northern archaeologists met a lot of interest down south. The cooperation between archaeologists and geologists has a long tradition in the Nordic countries. At that time, the discussion about recent climatic change was not that prevalent, but climate has always influenced environment and humans. This type of scientific activities leading to frequent visits to Strasbourg also provided for chances to learn about lobbying.

Digitalization has of course changed all experimental work, when compared to the situation in the early 70's. Online preparation methods and new detector systems make it possible to analyze new materials and much smaller samples at much higher throughput. Good examples are the accelerator technique applied to dating, and the modern analyzing methods for stable isotope studies. Advances in biochemistry brings fascinating possibilities to be applied in archaeology. Digitalization has also changed data handling while much more advanced statistical methods are available today.

This can be compared with early data handling by calculators, letters by typewriters and snail mail.

This becomes particularly apparent when considering today's possibilities provided by the internet, communication being very different when compared to the early days. When arranging the 3rd SMIA conference in 1984, I remember that all correspondence was based on typewriting and sending letters by mail. With more than 200 participants, it meant sending out and receiving a few hundred letters.

The Internet also in many ways strongly influences co-operation and research. Research groups, and even large consortia, can be brought together, and information and data can be exchanged without delay. The possibility to bring out new knowledge through open-access channels is developing rapidly. All this did not exist when the first proceedings from our Nordic meetings were published.

Archaeometry is a field where two cultures meet: science and humanities. That requires cooperation between researchers from many different fields. In his book "*Consilience: The Unity of Knowledge*", Edward O. Wilson discussed methods that have been used to unite science, and might be able to

unite science with humanities. Wilson used the term “consilience” to describe the synthesis of knowledge from different specialized fields of human endeavor. The Finnish philosopher Georg Henrik von Wright in *”Humanismen som livshållning och andra essayer”* suggests “A common basis is the intelligent relationships to the subject we study”. It is important to show respect for each other’s work.

Despite the almost unlimited possibilities that seem to appear through the digitalized world and artificial intelligence, we still as humans, need to come together at meetings like the SMIA XI, for open discussions and the exchange of ideas.

I therefore conclude by referring to the wisdom of Väinämöinen in the introduction of the Finnish epic poem Kalevala (Translated from Finnish by Keith Bosley):

*The words unfreeze in my mouth
and the phrases are tumbling
upon my tongue they scramble
along my teeth they scatter.
Brother dear, little brother
fair one who grew up with me
start off now singing with me
begin reciting with me
since we have got together
since we have come from two ways!*

*We seldom get together
and meet each other
on these poor borders
the luckless lands of the North.
Let’s strike hand to hand
fingers into finger-gaps
that we may sing some good things
set some of the best things forth
for those darling ones to hear
for those with a mind to know
among the youngsters rising
among the people growing –*

Selected reading

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